

ABSTRACT OF THE DISCLOSURE

A switching regulator that operates at a frequency for a first range of feedback signal values and at a variable frequency without skipping cycles for a second range of feedback signal values. In one embodiment, a switching regulator for a switched mode power supply includes a power switch coupled between drain and source terminals of the switching regulator, which are to be coupled to control the delivery of power to an output of a power supply. A control terminal of the switching regulator is to be coupled to an output of the power supply. The switching regulator includes a control circuit coupled to the control terminal and generates a feedback signal that is responsive to the output of the power supply. The control circuit also generates a drive signal that is coupled to control the switching of the power switch. The control circuit generates the drive signal responsive to the feedback signal. The drive signal has a fixed frequency for a first range of feedback signal values and at a variable frequency without skipping cycles for a second range of feedback signal values.